



MARINE CORPS SYSTEMS COMMAND
UNITED STATES MARINE CORPS

Transportation & Distribution Information Systems (TDIS)

Joseph W. Rothrock
(703) 432-5121, DSN 378-
5121

FAX (703) 432-5184



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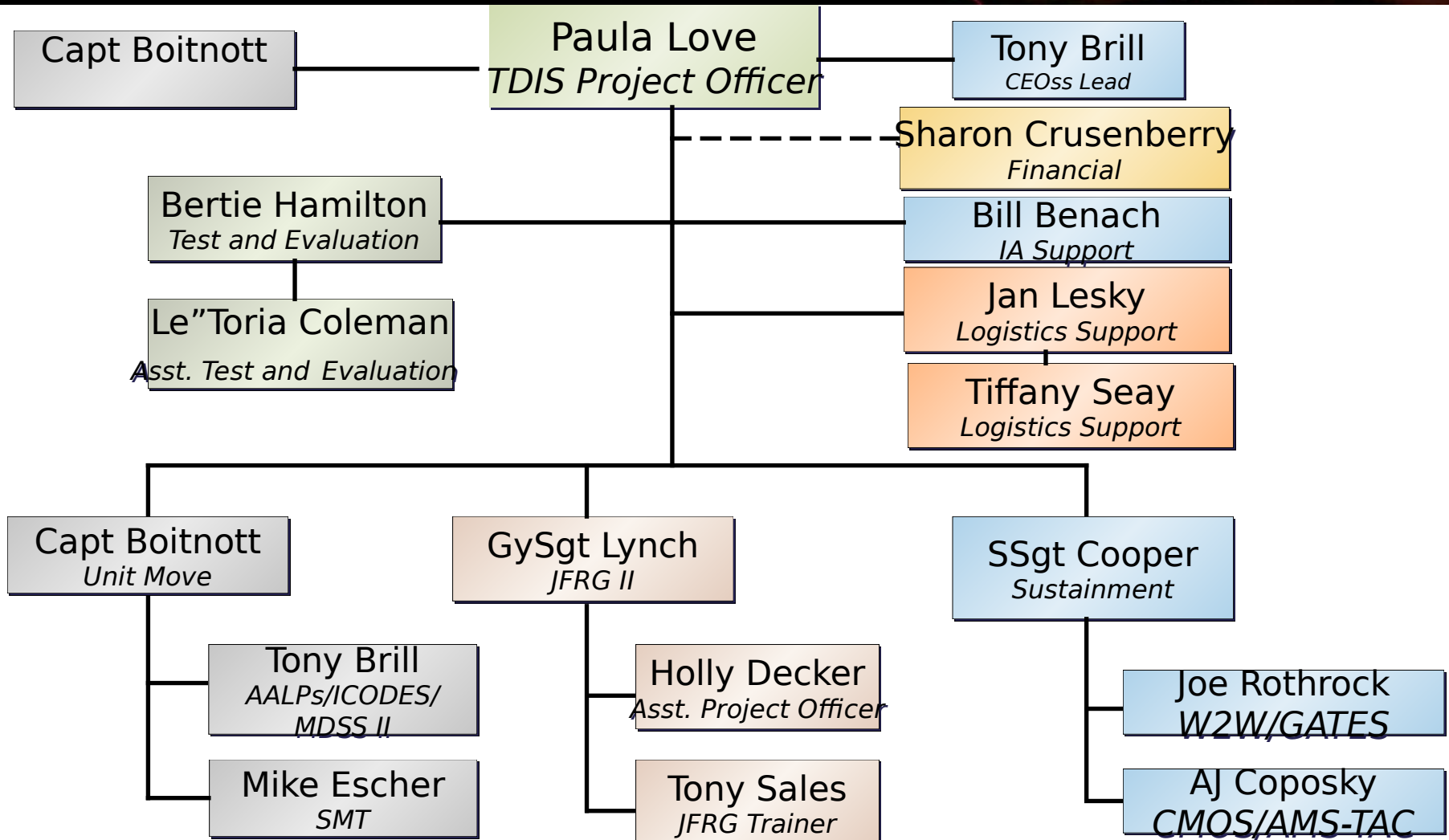
Mission

To develop, provide, and maintain integrated logistics systems that improve transportation, FDP&E, AIT, and distribution services to the Warfighter in a deployed and garrison environment, enhancing their war fighting capability.



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TDIS Applications

- ◆ **AMS-TAC - Automated Manifest System - Tactical**
- ◆ **CMOS - Cargo Movement Operations System**
- ◆ **W2W - Warehouse to War fighter**
- ◆ **Future Plans include integration of life cycle management responsibilities for:**
 - **TOPS, AGTR, GATES, Power track, GFM**
 - ◆ **Manpower and Funding Resources**

Independent AIT/RFID Program Office (2005)



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AMS-TAC



◆ AMS-TAC Current

- Fielded version 3.0.7
- Testing complete for version 3.1
 - ◆ SSAA/IA documentation in process
 - ◆ NMCI Certification pending resolution of challenges
 - Peer-to Peer or mapping is in violation of NMCI business rules
 - Using Unit budget for appropriate NMCI Seat assignment
 - Establishing seat assignments



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AMS-TAC



◆ AMS-TAC Future

- Alternatives
 - ◆ Web-enable in concert with client version (Navy/USMC venture)
 - ◆ Integration with W2W
 - ◆ Integration into CMOS
 - Capabilities Based Assessment Team (CBAT) vision
 - More Users MLG
 - Functionality tradeoffs btw Services



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CMOS



- ◆ 7.0 in IA certification process
- ◆ 7.1 certification will start upon completion of 7.0 upgrade
- ◆ Everyone should be writing RFID Tags out of CMOS for Iraq Shipments (IAW Policy)
- ◆ Working keyboard readers vice scanners
- ◆ Working 2d Barcode for 1348's
- ◆ Training 5-9 Jun, ANG, Harrisburg, PA.
 - Aug class unfunded
 - AIT Lab setup possible for mid term solution
- ◆ SPI Refresh, 55 Desk 18 Laptops
- ◆ Web-enable, USTC CBAT initiative
- ◆ D-CMOS
 - ✓ Any issues ?



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Bridge Technology

LTMITV-W2W

Last Tactical Mile In-Transit Visibility

Warehouse to



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W2W Background

◆ I MEF creation

- Late Summer 2003 - SYTEX (Prime Vendor/Systems integrator)
- Deployed to Iraq

◆ II MEF transitioned deployment and refined W2W material solution and business process

◆ MARCORSYSCOM assumed program management responsibilities in Aug 05



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W2W

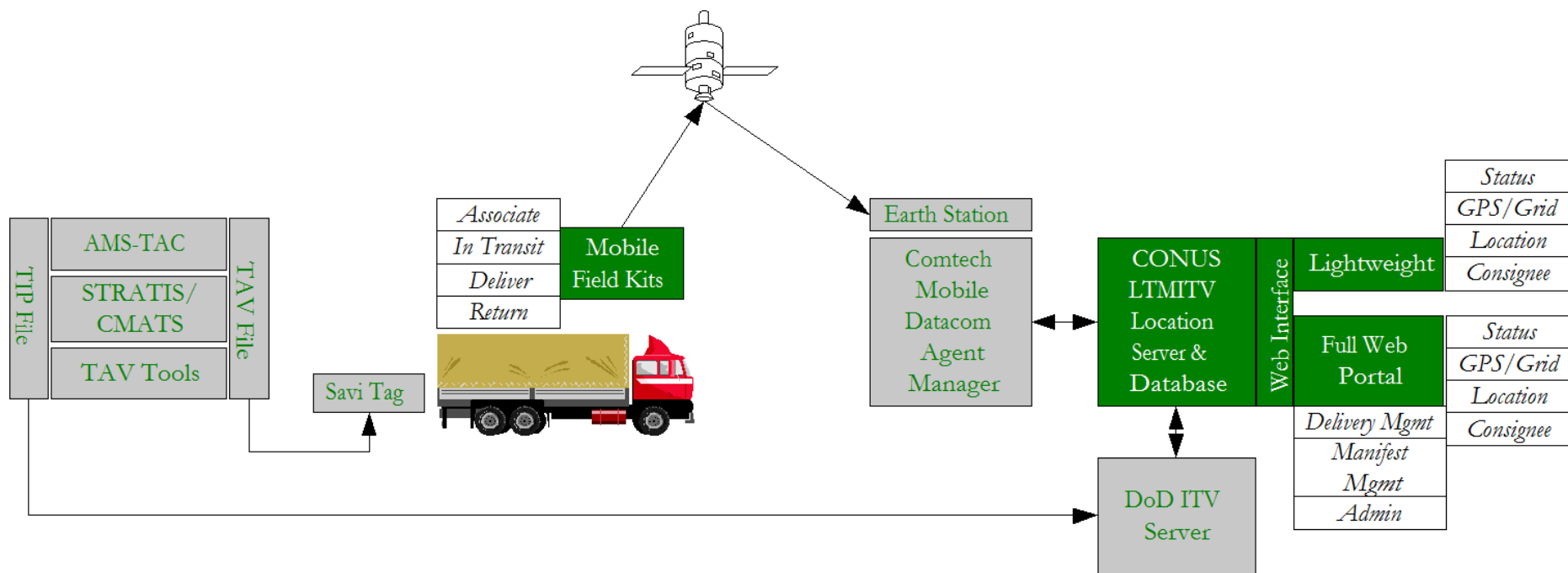
- ◆ Last-Mile' visibility of supplies forward
- ◆ Non-nodal location updates.
 - Not dependent on nodal interrogators
- ◆ Electronic capture of consignee data at delivery point
- ◆ Automated generation of AS1/AS2 transactions



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W2W





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W2W Principle Items

◆ Server

◆ Mobile Kit

- ◆ Computer (Laptop/tablet)
- ◆ Transceiver
- ◆ Cable Assembly
- ◆ Power Supply

No difference btw Base Unit Kit or Mobile Kit just how it is employed



W2W Functional

Overview

◆ Server

- Receives and parses TIP files or content level detail from ITV
- From Base Unit Kit or Mobile Kit
 - ◆ Receives location (GPS) updates
 - ◆ Receives camp drop, RUC pickup and RUC delivery data
- Provides rich query and lightweight query alternatives via web interface
- Sends AS1 and AS2 80 card column courier file updates to USMC server for consumption based on in-garrison and theatre business rules



W2W Functional

Overview

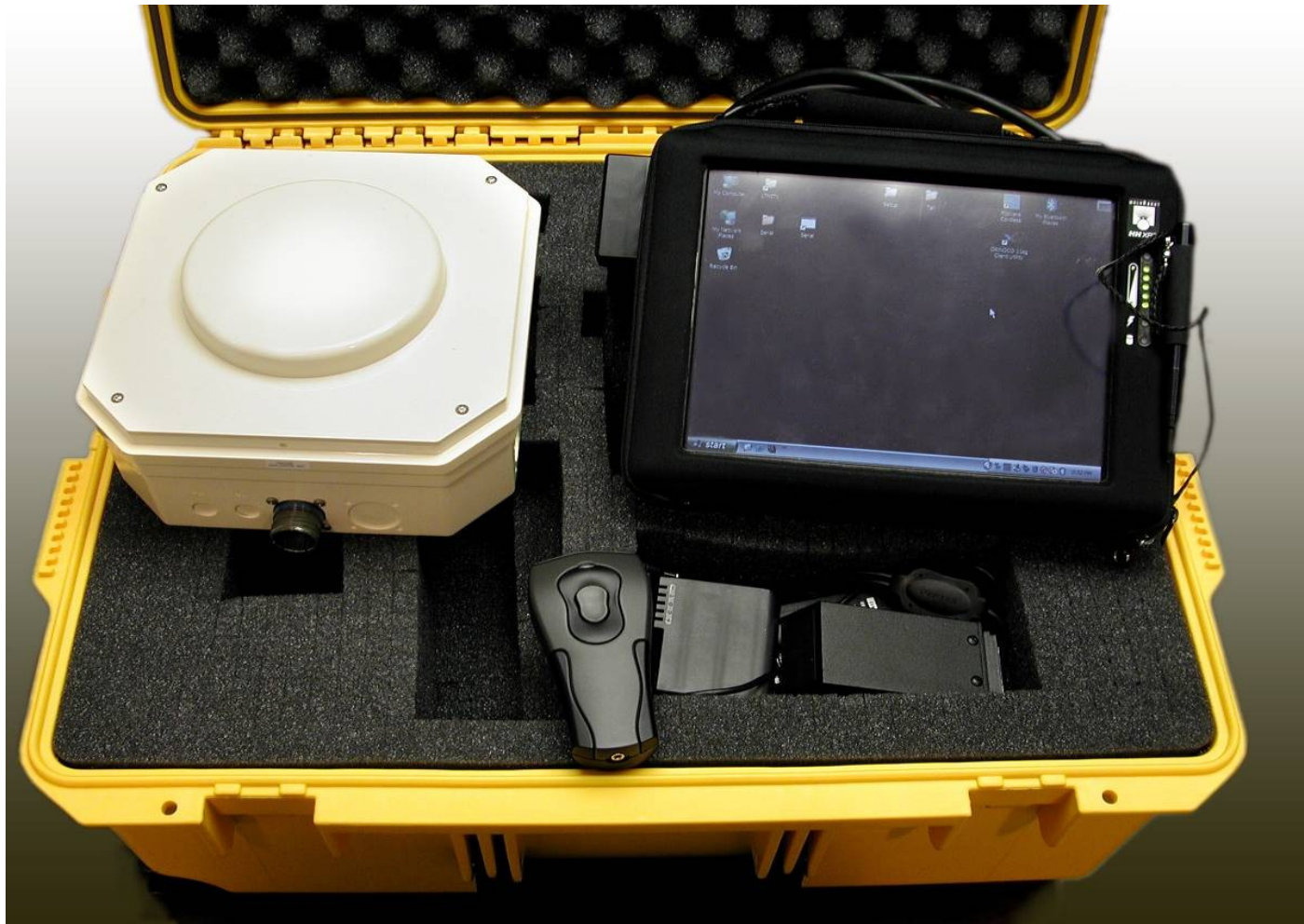
◆ Base Unit Kit or Mobile Unit Kit

- Computer with Visibility Tracking Program (VTP)
- At delivery preparation – input of PDC, AAC and Tag ID
- At Camp Drop, RUC Pickups and End RUC Deliveries
 - ◆ Mobile Unit Kit – GPS updates and input of Tag ID and Consignee data
 - ◆ Base Unit Kit – input of Tag ID and Consignee data



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- ◆ Visibility Tracking Program
- ◆ Software application that runs on Tablet PC, which is part of a Field Kit
 - A few touch screen, most pen-based
 - Pen-based provide brighter screens
 - Includes graphic keyboard pop-up to allow entry of name/textual data via keyboard
 - Pen-based also provides additional means of handwriting recognition for input



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W2W



 VTP Main Menu



Lost Tactical Mile In Transit Visibility

Last Tactical Mile In Transit Visibility

Warehouse to Warfighter Version 1.0.1858.24279

Status

FIELD KIT #: 99999	LOCAL TIME: 1603	ZULU TIME: 2103
GRID: [NO FIX]	LATITUDE: [NO FIX]	LONGITUDE: [NO FIX]

System Check

Start Route

RUC Delivery

Camp Drop

End Route

Help

Transceiver Load

< Tests for VTP Readiness

< START a New Delivery Session (Prepare for your Route)

< DELIVER Gear to Consignee RUC

< DROP Gear at Intermediate Location (NOT to Consignee)

< END the Current Delivery Session

< Documentation and Help for the VTP



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W2W

- ◆ Correlates delivery manifest data and Tag IDs with a field kit that is placed within a delivery/convoy vehicle
- ◆ Provides a means to query the location and current status of materiel pushed from SMU/TMO forward via a web enabled interface
- ◆ Can be configured 2 ways:
 - Mobile unit on each supply convoy from warehouse
 - ◆ Direct RUC delivery - AS2 (D6T)
 - ◆ Intermediate camp drop - AS1
 - Fixed system at each camp
 - ◆ Capture subsequent RUC pickup from camp - AS2 (D6T)



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W2W

- ◆ Relies on satellite transceiver and GPS to communicate data to Location Server
 - Designed to use minimal bandwidth
 - Same transceivers as MTS and BFT
 - Provides robust seamless satellite data communications to ensure data that is sent up is not 'lost in the ether'
 - All communications between Field Kit and Satellite are encrypted
- ◆ Does not depend on a localized server
- ◆ Laptop does not use mapping software- it is purely an input/filter for data up to the Location Server



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W2W





LAST TACTICAL MILE IN TRANSIT VISIBILITY

Warehouse to Warfighter

Log In

Username:

Password:

Login

- [I meant to go to the DoD ITV web site](#)
- [I am a Using Unit with low bandwidth but would like to query LTMITV](#)



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W2W



LTMITY - Query - Microsoft Internet Explorer provided by AT&T WorldNet Service

File Edit View Favorites Tools Help

DoD ITV Server
Lightweight LTMITY
Log Out

LAST TACTICAL MILE IN TRANSIT VISIBILITY

Warehouse to Warfighter

Query Manifest View Delivery Mgmt Admin

Search DOC NUMBER: NSN: TCN:
Manifest Data RUC: Tag ID: Last:

RUC TAG	TCN	Items	Status	Last Position	Last Updated
MMX200 000000	MMC10041710005XXX	13	Closed	38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132	2/3/2005 6:06:08 PM

Document Number	NSN	Nomenclature	UI	QTY	RIC
MMX20051690001	5999010321692	ACCESSORY MAINT KIT TELE	EA	00003	MC1
MMX20051690002	6625010906789	ADAPTER,TEST,POWER SUPPLY	EA	00004	MC1
MMX20051690003	5895012509557	CONVERTER,MODEM,SI	EA	00005	MC1

[MMX20051690004](#)
[MMX20051690005](#)
[MMX20051690006](#)
[MMX20051690007](#)
[MMX20051690008](#)
[MMX20051690009](#)
[MMX20051690010](#)
[MMX20051690011](#)
[MMX20051690012](#)
[MMX20051690013](#)

[MMX200 000001](#)
 [MMX200 000002](#)
 [MMX200 000003](#)
 [MMX200 000004](#)

TagHistory - Microsoft Internet Explorer provided by AT&T WorldNet Service

TAG: 000004

Log Date	Position	Status
2/3/2005 6:17:37 PM	38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132	Closed
2/3/2005 6:17:36 PM	38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132	Delivered
2/3/2005 6:12:26 PM	38° 54' 36" N 77° 13' 12" W 18SUJ 07513 09132	Camp DropOff
2/3/2005 6:09:56 PM		In Transit
		Waiting for Details
		Pending

start C. 2 P. R. C. My Documents 1:54 PM Thursday



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W2W



Search Manifest

DOC NUMBER:	M2832143347281	NSN:	
Tag ID:		RUC:	
TCN:			

home - Microsoft Internet Explorer provided by AT&T WorldNet Service

Address: http://laddemo1.sytexinc.com/ltmitv/home.aspx

Search Manifest

DOC NUMBER:	M2832143347281	NSN:	
Tag ID:		RUC:	
TCN:			

Search Reset

RUC TAG	TCN	Items	Status	Last Position	Last Updated
M28321 730764	M283214336T730764	17	Closed	33.35 N 117.41 W 61851 90164	12/2/2004 5:40:12 PM
Document Number	NSN	Nomenclature	UI	QTY	RIC
M2832143347281	2540014957611	SEAL,UPPER DOOR HIN	EA	00001	MC1
M2832143347291	2930014956890	FAN OPERATOR	EA	00001	MC1
M2832143356334	5330009668657	PACKING ASSORTMENT,	EA	00001	MC1
M2832143356336	5975005709598	STRAP,TIEDOWN,ELECT	HD	00001	MC1
M2832143356338	5970004194291	TAPE,INSULATION,ELE	RO	00001	MC1
M2832143356339	5940005250907	TERMINAL KIT	KT	00001	MC1
M2832143356354	6150010270125	CABLE ASSEMBLY,SPEC	EA	00001	MC1
M2832143356355	4820013988314	VALVE,CHECK	EA	00002	MC1
M2832143356390	6240001433070	LAMP,INCANDESCENT	EA	00004	MC1
M2832143356391	6240001536494	LAMP,INCANDESCENT	EA	00004	MC1
M2832143357323	5340012658911	HANDLE,DOOR	EA	00001	MC1
M2832143357329	5340011553798	LEVER,MANUAL CONTRO	EA	00001	MC1
M2832143357330	5310009752075	NUT,PLAIN,HEXAGON	HD	00001	MC1
M2832143357331	5340009850823	CLEVIS,ROD END	EA	00001	MC1
M2832143357332	5315008423044	PIN,COTTER	HD	00001	MC1

Lightweight Query



Quick User Guides

Hardware Setup:

- 12VDC Cigarette Adapter (or 24VDC VARIO Slave Port)
- Tablet PC Barcode Scanner
- Transceiver
- Cables & Inverter

Software Interface:

Battery: Awaiting Test. **Auto**

Transceiver: Awaiting Test. **Auto**


Barcode Reader: Awaiting Test. **User Scan**

ITV Tag Number: 000002

Scanned Tags (2):

- 000001
- 000000

Map: Shows the location of the scanned tag (000002) on a map.



LTMVW - Web Site User Guide

For support please contact lrmvwsupport@sysnetx.com

Version 2.0.0
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This guide is intended for Using Units/ Consignees who wish to query for requisitioned gear which is en route along the "Last Tactical Mile". Gear that has been loaded up for delivery from a USMC garrison or tactical distribution point which has an active RFID Tag associated can be queried here. Position updates are by time interval instead of modal-based, and consignee or intermediate drop location are provided down to the Document Number level.

From the login page you can also navigate to the Lightweight (text only) query portion of the web interface, or go directly to the DTD ITV Web Site.

Once logged in, you will be directed to the Query Page (below).

Clicking on the **DnD ITV Server** or **Lightweight LTMVW button** on the top left will bring you out of the session and send you to the respective sight within the same browser window

These buttons are primarily for supply and distribution activities and while they use the system for managing delivery sessions,

In this example, **Query by RUC** is implemented. One active tag ID is maintained record is returned for the time period of the last 24 hours.

*NOTE: Status of "Waiting for Details" is also uniquely indicated if the **RUC TAG** column only has a TAG ID, [N], RUC.]

Clicking the **RUC/TAG Link** will open a separate window titled "Tag Location and Status History" within the system.

Clicking the **Expand Button (Down Arrow)** will return a list of Document Numbers contained within the manifest

Clicking on a **Document Number** will return a detailed view of that single document, including status, as well as intermediate location or consignee data, where applicable.

Clicking **BACK** will return the display to the prior screen.

Query by RUC or NSN will show all Tag IDs. Manifests associated with the queried element.

Query by Tag ID, TCN or Document Number will return the single tag manifest associated with that data element.

If by Document Number, all records will be highlighted among the items on the associated manifest.

Main URL : <http://lrmvwt.sysnetx.com/lrmvwt>

This site requires a username and password. Please email LTMVW support at the above address to request a username and password. Please include your name, rank, outfit and last 4.

If you have a username and password, enter these and click [Login]

!Note!! You will be required to re-authenticate after 20 minutes of inactivity.

Username:		<input type="button" value="Go"/>
Password:		<input type="button" value="Go"/>

LAST TACTICAL MILE IN TRANSIT VISIBILITY Warehouse to Warfighter

Query

Search	DOC NUMBERS	STATUS	DATE	TIME	UNIT	LOCATION	DELIVERY DATE	DELIVERY TIME	DELIVERY STATUS
Manifest Data:	LOC:	Tag ID:							

From this page one can query by Document Number, RUC, NSN, Tag ID or TCN.

Limit your query results by time interval

Search	Doc Num	Manifest Date	Status	Unit	Location	Delivery Date	Delivery Time	Delivery Status
<input type="radio"/> Tag ID <input checked="" type="radio"/> RUC <input type="radio"/> NSN <input type="radio"/> TCN	<input type="text" value="RUC: 10000000000000000000"/> <input type="button" value="Clear"/>	<input type="text" value="10/10/2006"/> <input type="button" value="Clear"/>	<input type="radio"/> Pending <input checked="" type="radio"/> Delivered <input type="radio"/> Waiting for Details <input type="radio"/> Waiting for Manifest	<input type="text" value="10000000000000000000"/> <input type="button" value="Clear"/>	<input type="text" value="10/10/2006"/> <input type="button" value="Clear"/>	<input type="text" value="10:00:00"/> <input type="button" value="Clear"/>	<input type="text" value="10:00:00"/> <input type="button" value="Clear"/>	<input type="button" value="Go"/>

Status of : Tag ID Manifest has been identified to go on delivery, and current level data has been received from the field or from the DnD ITV Server.

Waiting for Details :- Tag ID Manifest has been identified to go on delivery, but current level data has not yet been received. *

In Transit :- Gear is on track, conveyer for delivery.

Camp / Drop :- Gear has been delivered to an intermediate location and remains tagged for future delivery run or for consignee pickup.

Cloud - DELIVERED TO CONSIGNEE

Query

Clicking the Query Button at the top of the page at any time will clear any existing query results and reset the page.

Web Site/Query

Lightweight URL: <http://lrmvwt.sysnetx.com/lrmvwlw>

From this page one can query by Document Number, RUC, NSN, Tag ID or TCN.

Search	Doc Num	Manifest Date	Status	Unit	Location	Delivery Date	Delivery Time	Delivery Status
<input type="radio"/> Tag ID <input checked="" type="radio"/> RUC <input type="radio"/> NSN <input type="radio"/> TCN	<input type="text" value="RUC: 10000000000000000000"/> <input type="button" value="Clear"/>	<input type="text" value="10/10/2006"/> <input type="button" value="Clear"/>	<input type="radio"/> Pending <input checked="" type="radio"/> Delivered <input type="radio"/> Waiting for Details <input type="radio"/> Waiting for Manifest	<input type="text" value="10000000000000000000"/> <input type="button" value="Clear"/>	<input type="text" value="10/10/2006"/> <input type="button" value="Clear"/>	<input type="text" value="10:00:00"/> <input type="button" value="Clear"/>	<input type="text" value="10:00:00"/> <input type="button" value="Clear"/>	<input type="button" value="Go"/>

Shows status, location, date/time of most recent status (GMT) and consignee, if applicable.



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Next Steps

- ◆ Continue to assess operational use
- ◆ Continue in-theatre fielding and assessment
- ◆ Field Kits to all 3 MEF's for Training Base
- ◆ Determine additional requirements
- ◆ Conduct Requirements Board for seamless distribution process (AMS/W2W ?)
- ◆ Future minor releases
- ◆ Passive RFID options
- ◆ Smaller footprint (Handheld)
- ◆ Converge with other SatCom providers
- ◆ MCEITS, IA Process



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What it all Means



- ◆ Visibility from Warehouse to Warfighter
- ◆ Robust COTS platform
- ◆ Simplified approach
 - Uses pre-positioned data
 - Economic use of bandwidth
- ◆ Not intended as another stovepipe
- ◆ Reusable platform to solve real problems right now...
- ◆ ...while recognizing that change is inevitable with:
 - Increased use and feedback
 - Technology trends and adoption
 - Standards, policy and directive evolution



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Questi

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(TDIS)
Program Office

***Thank
You !***